

Sample Name:

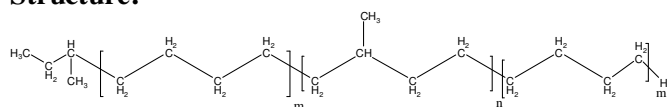
**Poly(Ethylene-*b*-Ethylene Propylene-*b*-Ethylene)
triblock copolymer**

Other name:

**Hydrogenated form of Poly(Butadiene-*b*-Isoprene-
b-Butadiene), predominantly in 1,4-addition**

Sample # **P19573A-EEPrE**

Structure:



Composition:

$M_n \times 10^3$ (Bd-b-IP-b-Bd)	PDI
18.5-b-246.0-b-18.0 (by NMR)	1.10
After Hydrogenation 19.0-b-253.0-b-19.0	1.10

Degree of Hydrogenation	> 98%
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Synthesis Procedure:

The polymer was synthesized by anionic polymerization using cyclohexane as a solvent.

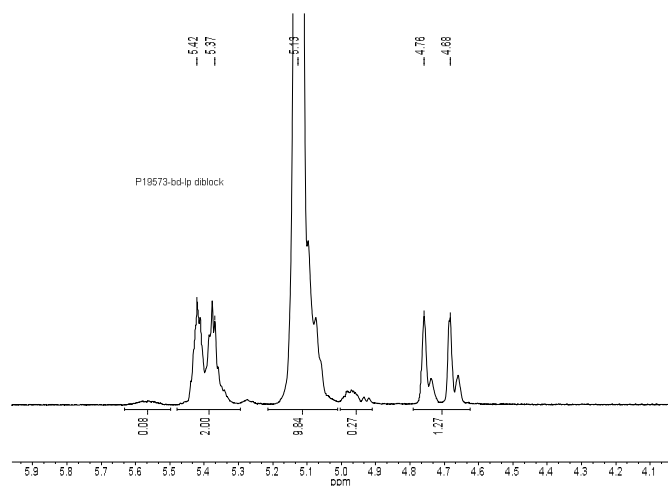
Characterization:

The polymer was analyzed by ^1H NMR, SEC, DSC.

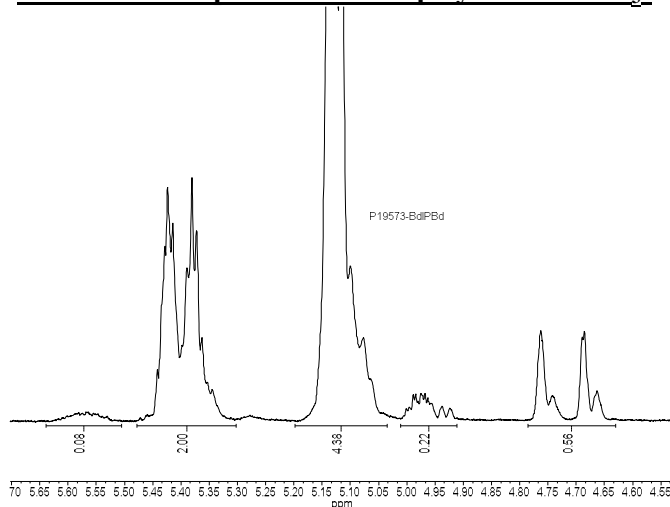
DSC thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^\circ\text{C}/\text{min}$. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

^1H NMR of Bd-IP diblock copolymer in CDCl_3 :



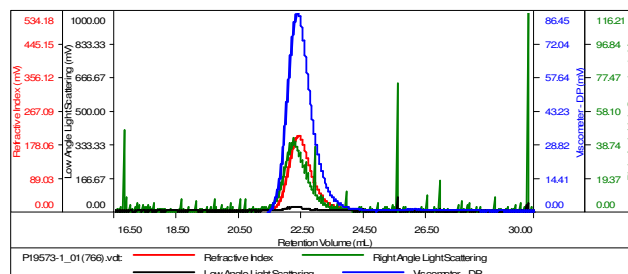
^1H NMR of Bd-IP-Bd triblock copolymer in CDCl_3 :



SEC of the first polybutadiene block:

Sample ID-P19573-Bd first Block

Concentration (mg/mL)	0.5580
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-Nov-2015-0000.vom
Column Set	3x PL 1113-6300
Solvent	THF

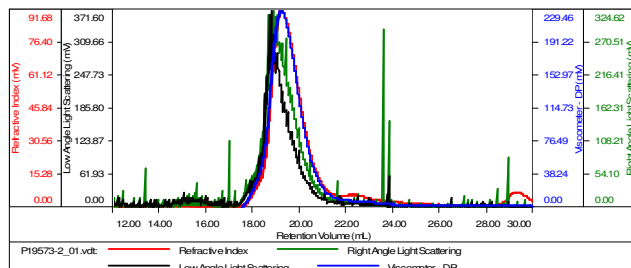


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19573-1.01(766).vdt	18,354	20,106	18,807	1.095	4.0816

SEC of Bd-IP diblock copolymer:

Sample ID-P19573-BdIP

Concentration (mg/mL)	0.4252
Sample dn/dc (mL/g)	0.1320
Method File	PS80K-Nov-2015-0000.vom
Column Set	3x PL 11136300
Solvent	THF

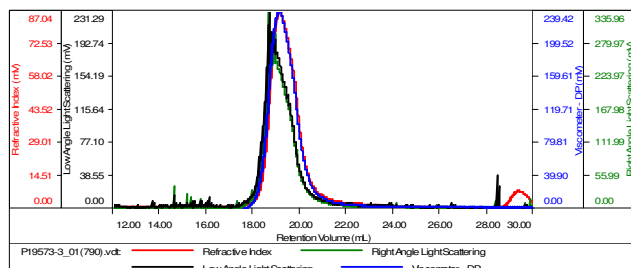


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19573-2_01.vdt	264,340	411,073	394,344	1.555	23.6731

SEC of Bd-IP-Bd triblock copolymer:

Sample ID-P19573-BdIPBd

Concentration (mg/mL)	0.2448
Sample dn/dc (mL/g)	0.1650
Method File	PS80K-Nov-2015-0000.vom
Column Set	3x PL 11136300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19573-3_01(700).vdt	282,202	310,457	311,232	1.100	36.5308